

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

Claims 1-65 (canceled)

66. (previously presented) A method of stimulating stem cell division in a mammal exposed to an agent which damages or destroys stem cells comprising administering a stem cell proliferation stimulating amount of INPROL; wherein said INPROL is selected from the group consisting of the alpha chain of hemoglobin, the beta chain of hemoglobin, the gamma chain of hemoglobin, the delta chain of hemoglobin, the epsilon chain of hemoglobin, the zeta chain of hemoglobin,

a polypeptide comprising the sequence of amino acids 1-97 of the human alpha hemoglobin chain,

a polypeptide comprising the sequence of amino acids 1-94 of the human alpha hemoglobin chain,

Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:1),

biotin-Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:36),

(iodo)Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:37),

Phe-Pro-His-(iodo)Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:38),

(iodo)Phe-Pro-His-(iodo)Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:39),

Cys-Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val-Cys (SEQ ID NO:2), and

Asp-Ala-Leu-Thr-Asn-Ala-Val-Ala-His-Val-Asp-Asp-Met-Pro-Asn-Ala-Leu-Ser-Ala (SEQ ID NO:3).

67. (previously presented) The method as in claim 66 wherein said agent is an antiviral agent or an anti-neoplastic agent.

68. (previously presented) The method as in claim 95 wherein said opiate compound is selected from the group consisting of morphine, etorphine, codeine, heroin, hydromorphone, oxymorphone, levorphanol, levallorphan, codeine, hydrocodone,

oxycodone, nalorphine, naloxone, naltrexone, buprenorphine, butanorphanol, nalbuphine, meperidine, alphaprodine, diphenoxylate, fentanyl, (D-Ala²,N-Me-Phe⁴,glycinol⁵)-Enkephalin, (D-Arg²,Lys⁴)-Dermorphin-(1-4)-amide, and nociceptin.

Claims 69-92 (canceled)

93. (previously presented) The method as in claim 66 wherein said INPROL is selected from the group consisting of Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:1), Cys-Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val-Cys (SEQ ID NO:2), and Asp-Ala-Leu-Thr-Asn-Ala-Val-Ala-His-Val-Asp-Asp-Met-Pro-Asn-Ala-Leu-Ser-Ala (SEQ ID NO:3).

94. (previously presented) The method as in claim 93 wherein said INPROL is Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:1).

95. (previously presented) The method as in claim 66 further comprising administering a stem cell proliferation stimulating amount of an opiate compound.

96. (previously presented) The method as in claim 95 wherein said INPROL is selected from the group consisting of Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:1), Cys-Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val-Cys (SEQ ID NO:2), and Asp-Ala-Leu-Thr-Asn-Ala-Val-Ala-His-Val-Asp-Asp-Met-Pro-Asn-Ala-Leu-Ser-Ala (SEQ ID NO:3).

97. (previously presented) The method as in claim 96 wherein said INPROL is Phe-Pro-His-Phe-Asp-Leu-Ser-His-Gly-Ser-Ala-Gln-Val (SEQ ID NO:1).